

NEWARK BAY STUDY AREA  
PRP DATA EXTRACTION FORM

SDMS Document



99693

# ***Troy Chemical Corporation, Inc.***

## **CURRENT MAILING ADDRESS/CONTACT INFO:**

Troy Chemical Corporation, Inc.  
One Avenue L  
Newark, New Jersey

The current mailing address for this additional PRP is not currently known and will need to be developed:

- American Cyanamid Company.

## **FACILITY ADDRESS:**

The Troy Chemical Corporation, Inc. (TCC) site is located at 1 Avenue L, Newark, Essex County, New Jersey. The TCC site is alleged to be part of the former Prentiss Drug and Chemical site located at 338 Wilson Avenue. The 5.2 acre TCC site sits in the heavily industrialized area known as the "Ironbound District" and appears on the Essex County tax maps as Block 5038, Lot 98.

The site was surrounded by other industrial facilities including the Albert Steel Drum/Prentiss Drug and Chemical (ASD/PDC) site to the north.

## **FINANCIAL VIABILITY:**

The following, and/or their successors or assigns, who exist today should be considered as candidate PRPs:

- Troy Chemical Corporation
- American Cyanamid Company.

Information concerning the financial viability of these PRPs associated with this site should be obtained via CERCLA 104 (e) requests for information.

## **DATES OF OPERATION:**

Operations at this site commenced in 1868 and as of September 2000, TCC was operating at the site.

## **DESCRIPTION OF FACILITY OPERATIONS:**

TCC has operated at the site since 1956 manufacturing specialty chemicals used in the paint industry such as biocides, fungicides, metallic soaps, preservatives, dryers, theology agents (flow agents), surfactants, and dispersants.

By 1987, non-mercurial biocides accounted for 52% of TCC's total production. The manufacture of mercury-based products, which had accounted for 6 % of the company's business, ceased in February 1987. NJDEP and USEPA investigations indicate TCC may have processed or produced Mercury-based products until as recently as 1991.

*The subject site has a long history of manufacturing activities. The Heller and Merz Company/American Ultramarine and Globe Aniline Works manufactured ultramarine and aniline colors from approximately 1868-1927. American Cyanamid Company/Calco Chemical Company operated at the site from approximately 1931-1951, during which time they manufactured a variety of coal tar dyes and intermediates. BAC000001*

Corporate history as of September 1998 reveals that in 1952, Troy Chemical Company began chemical formulation activities at the facility. In 1956, Troy Chemical Corporation was incorporated and expressly assumed the assets and liabilities of Troy Chemical Company. The corporation also took over ownership and operations of the facility. In 1980, a variety of complex stock transfers, asset purchases, corporate dissolutions, and corporate name changes took place. As of December 1998, records indicated that Troy Chemical Corporation, Inc. was the successor entity and the continuing enterprise and alter ego of Troy Chemical Corporation; and Troy Chemical Corporation, Inc. was a subsidiary of Troy Corporation. However, an October 2004 Dunn & Bradstreet report identifies "Troy Chemical Corporation" at One Avenue L, Newark, New Jersey as a subsidiary of Troy Corporation. BBF000027, BBJ000005, BBJ0000007, BBJ000010, BBJ000009, BBJ000011

The following actions are known to have occurred or to be pending:  
From 1978 to 1987, 19 enforcement actions were issued against TCC by the NJDEP, EPA or PVSC.

In accordance with a Memorandum of Agreement (MOA) between the Troy Chemical Corporation and NJDEP, a Remedial Investigation was conducted and a report was issued in February 1998. Subsequently, a Remedial Investigation Report for Additional Soil and Groundwater Sampling was issued in September 2000. The report recommended that Troy would continue to maintain the existing cover and complete a deed notice as an institutional control to minimize future direct contact with the soil. For groundwater, the report recommended that Troy would document a Classification Exception Area following a review of groundwater data for upgradient sources of groundwater contamination. As of the September 2000 report, Troy has ongoing manufacturing of various chemicals at the site. In addition the site has a laboratory, warehouse and offices. BAC000001, BBF000024

TCC used and disposed of various chemicals during the course of their manufacturing activities at the site including 2,4-dinitrophenol and maleic anhydride, which have been classified as Class III organic compounds associated with Dioxin formation, by USEPA. BBF000028, BBJ000003

Ronnel, (a Class I pesticide), was detected at 8.7 ppm in an NJDEP sample of discharge to Pierson's Creek from TCC's Fungicide Plant, on site. BAC000001

Dioxin testing was never performed at the TCC site. Additionally, Dioxin was not analyzed in the samples from Pierson's Creek sediment on the TCC site. 2,4-Dinitrophenol was not detected in any of three Pierson's Creek sediment samples from the TCC site.

Additionally, Phenol (Class III Chemical associated with Dioxin formation) was detected at 26,000 ppb in Pierson's Creek sediment on site. Phenol was only detected at up to 160 ppb in sediment upstream from the site. Phenol was also detected in site groundwater. BBF000024

Aroclor 1222 was detected at a concentration of 650 ppm in site sediments and Aroclor 1254 was detected in site groundwater at a concentration of 7.5 ppb. BAC000001

Mercury found in site soil up to 4,290 ppm, and in groundwater up to 87 ppb. Mercury was also found in Pierson's Creek sediments at a concentration of 607,000 ppm. A sample from the cooling water discharge contained 42.2 ppb of Mercury and plant discharges contained 39 ppb. BAC000001, BBF000021

4,4'-DDT was detected up to 66 ppm and 4,4'-DDE up to 180 ppm in site soils.

Soil sampling identified the following contaminants at the levels indicated: BAC000001, BBF000021

Arsenic up to 55.7 ppm  
Barium up to 1,320 ppm  
Cadmium up to 0.08 ppm  
Copper up to 3,289 ppm  
Lead up to 10,800 ppm  
Mercury up to 4,290 ppm  
Silver up to 48.4 ppm  
Zinc up to 3,950 ppm

p,p DDT up to 32.76 ppb  
p,p DDD up to 32.86 ppb  
o,p DDT up to 2 ppb  
p,p DDE up to 8.3 ppb

Petroleum Hydrocarbons up to 14,000 ppm

Bis(2-ethylhexyl)phthalate up to 21 ppm  
Butyl benzyl phthalate up to 1.5 ppm  
Chrysene up to 25 ppm  
Fluoranthene up to 55 ppm  
2-methylnaphthalene up to 49 ppm  
2-methylphenol up to 0.11 ppm  
Naphthalene up to 52 ppm  
Phenanthrene up to 73 ppm  
Pyrene up to 30 ppm

Benzene up to 8.3 ppm  
Chlorobenzene up to 0.12 ppm  
Chloroform up to 0.66 ppm  
Dibenzofuran up to 12 ppm  
1,2-dichlorobenzene up to 0.12 ppm  
1,4-dichlorobenzene up to 0.12 ppm  
Pentachlorophenol up to 4.1 ppm  
1,2,4-trichlorobenzene up to 10 ppm  
Tetrachloroethene up to 2.7 ppm  
Trichloroethene up to 4.1 ppm  
Toluene up to 0.2 ppm  
Xylene up to 1.3 ppm

Groundwater sampling at the site identified the following contaminants at the levels indicated: BAC000001, BBF000021

Arsenic up to 3.51 ppm  
Copper up to 2.95 ppm  
Cyanide up to 0.691 ppm  
Lead up to 11.8 ppm  
Mercury up to 87 ppb  
Zinc up to 4.03 ppm  
Cyanide up to 0.691 ppm

Benzene up to 8.8 ppm  
Trichloroethene up to 14 ppm  
Tetrachloroethene up to 33 ppm  
1,1,1-Trichloroethane up to 16 ppm  
1,1-Dichloroethene up to 3.4 ppm  
1,2-Dichloroethene up to 1.3 ppm  
Chlorobenzene up to 21.2 ppm  
Toluene up to 45.7 ppb

Aroclor 1254 up to 7.5 ppb

**PERMITS:**

NPDES:

NJ0031453 BAC000001, BBF000015

POTW (pretreatment):

No information available at this time.

**NEXUS TO NEWARK BAY STUDY AREA:**

Direct:

Pierson's Creek has historically been used to discharge process wastes, storm water runoff, non-contact cooling water, boiler blowdown and steam condensate. Pierson's Creek, which discharges to Newark Channel approximately 0.75 miles from the site, was originally part of a private drainage system constructed in the mid-1800s. The creek originates from a City of Newark storm sewer that discharges to an underground culvert that runs upstream of the facility until it surfaces approximately 50 yards north of the facility on the ASD/PDC site. In the area ASD/PDC site, the creek has two branches: the west branch which begins just southwest of the former PDC building; and the east branch (also known as the "wood flume") which originates just northwest of the former ASD operation. Upon entering the TCC site, the creek (west branch) turns into a concrete flume which the City of Newark installed in 1956. The two branches combine south of the Troy Chemical site.

*Prior to 1965, process wastewaters from Troy were discharged untreated to Pierson's Creek. Between 1965 and 1976, Mercury-bearing wastewaters were treated by Sulfide precipitation prior to discharge to the creek, while all other process wastewaters continued to be discharged to the creek untreated. After 1976, the overall plant waste water treatment plant was installed. Both Mercury and non-Mercury process wastewaters were treated prior to discharge to the PVSC.*

NJDEP documents obtained during the course of this investigation state that "Based on the information available, it is clearly evident that past and present activities by Troy Chemical have seriously impacted the quality of water and sediment in Pierson's Creek and its tributary, both onsite and downstream of the facility." BAC000001

**Documented discharges:**

Site inspections have identified as many as 15 discharge pipes from the TCC facility to Pierson's Creek. In 1977, the NJDEP collected samples of certain TCC discharges to Pierson's Creek and identified several hazardous substances including heavy metals and the insecticide Ronnel (Class I pesticide) associated with dioxin formation. BBG000015

Also in 1977, Troy applied for a permit to discharge non-contact cooling water, boiler blowdown and condensate into Pierson's Creek. NJDEP granted that discharge permit (NJ0031453) for an effective period between May of 1978 and September of 1980. Troy renewed that permit until September of 1990, but in 1988 requested that it be terminated indicating that their discharge was discontinued on May 27, 1988. Their NJPDES permit was terminated on November 28, 1989. BAC000001, BBF000015

In October 1978, a NJDEP representative observed several non-point discharges to Pierson's Creek. The substances leaching into the Creek emanated from various sources including a sump pump within a containment area for a tank. The tank contained metallic dryers and Naphthalene. BAC000001

In January 1979, a spill from a process area within the Troy Chemical Site was visible in Pierson's Creek and extended to Delancey Street. Because of the large volume of the spill, the containment and cleanup required a week of work. BAC000001

A 1979 sampling event performed on sediments in the eastern drainage ditch, in the vicinity of the septic/leach field, revealed very high concentrations of mercury. As a result of these tests, EPA determined that TCC discharged Mercury-bearing wastes to the septic system at one time. Previously, a 1977 dye test revealed that the onsite septic system discharged directly to the creek.

Other than Mercury process wastes and lavatory wastes, it is unclear if other wastes were discharged to the septic system.

From January to May 1979, samples of the wastewater discharge were collected and PVSC determined that the site was discharging approximately 377 pounds per day of Mercury. The majority of this Mercury was not treated or removed and discharged directly to the Creek. BAC000001

During monitoring conducted from April 1, 1986 to June 30, 1986, the Mercury limit was exceeded 59 out of 60 times. BAC000001

#### Sanitary Sewer:

No information available at this time.

#### Stormwater:

Pierson's Creek has served as the principal storm drainage pathway for the vicinity of the TCC facility. TCC has received numerous violations and was subject to several regulatory enforcement actions for reported and unreported spills to site soils, poor housekeeping practices and improper storage of hazardous substances on site. Site soils have been sampled on many occasions since the 1970s and exhibit extensive contamination with volatile compounds, semivolatile compounds, heavy metals,

pesticides, and PCBs. Many of these contaminants are dioxin precursor chemicals or pesticides associated with the formation of dioxin. Surface water and/or sediment sampling from Pierson's Creek identify many of the same contaminants as those found in site soils. In particular, elevated levels of benzene, mercury and lead – hazardous substances used in great quantities and admittedly discharged by TCC – have been found in these media.

#### Documented discharges:

In January 1984, the New Jersey Division of Criminal Justice notified the NJDEP that a brown and green colored liquid was observed in Pierson's Creek. Although the exact source of the spill could not be determined, it was believed to be emanating from a process area within Building 91 at the Troy Chemical site. According the TCC personnel, the green color was attributed to a dye made by a former site owner, American Cyanamid, and the color appears whenever there was rainfall at the site. BAC000001

On February 24, 1990, approximately 20 gallon of No. 2 fuel oil was discharged to the storm sewer.

#### Runoff:

Cobalt hexoate and Calcium hexoate were discharge to soil and eventually to one of the site drainage channels. BAC000001

#### Groundwater:

An NJDEP report on Troy Chemical circa 1987 stated that "waste management practices by the Troy Chemical Company, especially prior to 1986, have been inadequate and have contributed to soil, air, surface water and groundwater contamination."

Groundwater investigations conducted by NJDEP and Troy indicate that groundwater beneath the site flows in a southerly direction, which is toward the Port of Newark Channel. Contaminants used at TCC have been detected in both shallow and deep groundwater. As previously stated, TCC has an extensive history of spills and illegal discharges of hazardous substances to site soils. NJDEP documents state that vertical and horizontal migration of contamination is possible and further state that "it is important to note that many of the contaminants detected including Mercury, Lead, Copper, Zinc and Benzene are highly utilized in many of the company processes... implicating Troy Chemical as... a contributor to groundwater contamination in the area."

#### Sampling Data:

Sediment samples from Pierson's Creek identified these contaminants at the levels indicated: BAC000001, BBF000002

Arsenic up to 5,760 ppm

Copper up to 3,590 ppm  
Lead up to 25,200 ppm  
Mercury up to 607,000 ppm  
Zinc up to 948 ppm

Benzene up to 1,200 ppm  
Chlorobenzene up to 31 ppm  
1,2-Dichlorobenzene up to 3.6 ppm  
1,4-Dichlorobenzene up to 1.7 ppm  
1,2,4-Trichlorobenzene up to 10 ppm  
2,4-Dinitrophenol up to 89 ppm  
Naphthalene up to 31 ppm  
Toluene up to 37 ppm  
1,1,1-Trichloroethane up to 1,400 ppm  
Trichloroethene up to 430 ppm

4,4'-DDD up to 180 ppm  
4,4'-DDT up to 66 ppm

Aroclor 1242 up to 650 ppm

Surface water sampling in Pierson's Creek identified these contaminants at the levels indicated: BAC00001, BBF000021

Arsenic up to 7,450 ppb  
Copper up to 97 ppb  
Mercury up to 886 ppb  
Nickel up to 405 ppb  
Zinc up to 270 ppb

Aroclor 1248 up to 16.5 ppb  
Aroclor 1254 up to 17.5 ppb  
Aroclor 1260 up to 28.3 ppb

Benzene up to 95 ppb  
Chlorobenzene up to 2.1 ppb  
1,1,1-Trichloroethane up to 31 ppb  
Ethylbenzene up to 11 ppb  
Tetrachloroethylene up to 44 ppb  
Tetrachloroethene up to 140 ppb  
Toluene up to 57.4 ppb

The following compounds were identified in site soils, groundwater, surface water or sediments and also found in sediment cores located in the Newark Channel.

Aroclor 1242 – 0.425 ppm



Aroclor 1248 – 5.31 ppm  
Aroclor 1254 – 5.85 ppm  
Aroclor 1260 – 2.98 ppm

4,4-DDD' – 0.355 ppm  
4,4-DDE' – 0.246 ppm  
4,4-DDT' – 1.32 ppm

Bis(2-ethylhexyl)phthalate – 300 ppm  
Chrysene – 16 ppm  
Fluoranthene – 90 ppm  
Naphthalene – 12 ppm  
Phenanthrene – 98 ppm

Arsenic – 75.3 ppm  
Barium – 497 ppm  
Copper – 957 ppm  
Lead – 981 ppm  
Mercury – 15.7 ppm  
Nickel – 157 ppm

**POTENTIAL NEXUS TO NEWARK BAY STUDY AREA:**

Direct:

No information available at this time.

Sanitary Sewer:

No information available at this time.

Storm Sewer:

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No information available at this time.

Runoff:

No information available at this time.

Groundwater:

Contamination known to exist in site groundwater may potentially impact Newark Bay.  
Information on groundwater contamination was provided above for review.

## **REFERENCES**

<b>BATES NO.</b>	<b>DATE</b>	<b>DESCRIPTION</b>
BAC000001	Undated	Troy Chemical Co., Inc. General Information, Site History, Areas of Concern
BBF000002	9/15/98	Letter to Greg Zalaskus from Tamara Sorell, EMCON, re: Remedial Investigation of Troy Chemical – responses to comments made in correspondence from 6/25/98
BBF000015	8/8/97	Draft Hydrologic and Hydraulic Study for the Rehabilitation of Pierson's Creek
BBF000021	6/98	Remedial Investigation Addendum for Troy Chemical Corp. prepared by EMCON
BBF000024	9/27/00	Remedial Investigation Report for Additional Soil and Ground Water Sampling and Remedial Action Selection Report for Soil – Troy Chemical, prepared by Environmental Liability Management, Inc.
BBF000027	Unknown	Troy Chemical Company, Inc., "General Information and Site Report"
BBF000028	09/26/02	RTK NET Search Facility Report for Troy Chemical (manifests)
BBG000015	6/9/77	Field inspection notes from Scott McCone re: Albert Steel Drum and Related Properties in Newark
BBJ000003	1993	Vista information on Troy Chemical Corp
BBJ000005	1998	Westlaw New Jersey Corporate Database re: Troy is Delaware Corporation
BBJ000007	4/30/1998	Westlaw New Jersey Database
BBJ000009		Dun and Bradstreet report on Troy Chemical
BBJ000010	10/15/04	Dun and Bradstreet report on Troy Chemical
BBJ000011	5/8/98	Westlaw New Jersey Database

## **RECOMMENDED FOLLOW-UP**

USEPA should issue 104(e) requests seeking information on the operational history of this site; the discharge routes from this site; and for each Candidate PRP identified, bring current its corporate status, including current status of any successor(s), and identify the current agents for service of legal process for each existing such entity.